| COLLEGE | # | TITLE | DESCRIPTION | PREREQUISITES |
| --- | --- | --- | --- | --- |
| Bates | MATH 098 | Intermediate algebra | Variables, equations, formulas, algebraic expressions, polynomials, exponents, roots, factoring, quadratic equations, algebraic fractions, graphing of linear and quadratic equations, problem solving, and practical exercises using the scientific calculator. | MATH 092 [elementary algebra] or QTS [qualifying test scores] |
| Bellevue | MATH 099 | Intermediate algebra | Expands algebra skills through an axiomatic approach. Students work with mathematical systems, solution of equations, inequalities, functions, exponents and logarithms, and coordinate systems. This course is similar to second-year high-school algebra. [See learning outcomes below.] | Placement by assessment OR MATH 098 [Introductory Algebra II] with a C- or better. |
| Bellingham | MATH 099 | Intermediate algebra | This course prepares students for entry into college level math courses. Topics include second degree equations and inequalities, relations and their graphs, exponential and logarithmic functions, and rational expressions. | MATH 098 [elementary algebra] with a grade of C or higher. Accuplacer algebra score of 75 or higher. |
| Big Bend | MPC 099 | Intermediate algebra | A continuation of MPC 095 [elementary algebra]. This course includes systems of equations and applications, functions, radicals and rational exponents, radical equations, complex numbers, quadratic equations and their applications, and an introduction to exponential and logarithmic functions | Appropriate score in the BBCC Mathematics Assessment OR successful completion of MPC 095 or MPC 091 and MPC 092 |
| Cascadia | MATH 094 | Intermediate algebra refresher | This course is a fast-paced condensed version of MATH 095 designed for students who only need a refresher of Intermediate Algebra topics in order to retest and place into college level math. Students who placed into college level math may also be take this course in order to refine skills which are essential for successfully completing their next math class. In particular, students who plan to enroll next in MATH& 141 may find this class helpful. Students may retake the COMPASS test at the end of this course in order to determine their new placement. Grading for this course is pass/fail only. (2 credits) | Completion of MATH 085 with a grade of 2.0 or higher OR placement by testing into MATH 095; and completion of ESL 060 or EFUND 040; OR placement into ENGL 080 or above. |
| Cascadia | MATH 095 | Intermediate algebra | This course builds on the knowledge developed in MATH 085. The primary content of the course is algebra, but topics in geometry, right triangle trigonometry, probability, and number theory are also included. Learners will continue to refine study skills and habits, team skills, logic, and the ability to express math visually, symbolically and in written forms while working with both abstract and real world applications. | Completion of MATH 085 [Elements of Algebra] with a grade of 2.0 or higher OR placement by testing in MATH 095; and completion of ENGL 080 with a grade of 2.0 or higher OR placement by testing in ENGL 090. |
| Centralia | MATH 099 | Algebra II | Introduces the concepts of functions, their graphs and properties. Particular attention will be paid to linear, quadratic, exponential and logarithmic functions. | MATH 098 [Algebra I] or its equivalent |
| Clark | MATH 095 | Intermediate algebra | A continuation of MATH 090 (elementary algebra). Factoring, rational expressions, radical expression, rational exponents, quadratic equations, exponential and logarithmic functions. Designed for the student who is prepared to take algebra at an accelerated pace. | MATH 090 with a C or better OR recommending score on placement test |
| Clover Park | MAT 098 | Introduction & Intermediate algebra | Algebraic operations and concepts, solving equations and inequalities including quadratic equations, algebraic functions, exponents, roots and radicals, graphing of linear and quadratic functions, and logarithms. | ASSET Intermediate Algebra score of at least 31; COMPASS Algebra score of at least 22; OR successful completion of MAT 091 [Introduction to Algebra] is required. |
| Clover Park | MAT 099 | Intermediate algebra | Algebraic operations and concepts, solving equations and inequalities including quadratic equations, rational expressions, exponents, roots and radicals, graphing of linear and quadratic functions, and introduction to logarithms. | Appropriate COMPASS OR successful completion of MAT 91 is required. |
| Columbia Basin | MATH 095 | Intermediate algebra | This course is a rapid coverage of high school level algebra. Topics include: integer and rational exponents, operations with polynomials and factoring, operations with rational and radical expressions, solving quadratic and rational equations, graphs of lines and parabolas, systems of equations, complex numbers, functions, and applications of all of the aforementioned. | 2.0 or better in MATH 097 is acceptable but not advised OR ASSET/COMPASS test placement |
| Edmonds | Math 90 | Intermediate algebra | Covers some topics of Math 080 in greater depth; additional topics include rational exponents, complex numbers, and an introduction to functions with an emphasis on linear functions. Intended to prepare students for college level mathematics courses. | MATH 080 or equivalent with 2.0 or higher, or appropriate score on Math Placement Test. |
| Edmonds | Math 095 | Applied intermediate algebra | Applications and algebraic techniques related to linear, quadratic, rational, and exponential functions; not for students planning to take Math 131, 140, or 240. | MATH 080 or equivalent with 2.0 or higher, or appropriate score on Math Placement Test. |
| Everett | MATH 099 | Intermediate algebra | Polynomials, rational expressions, exponents, radicals, linear and quadratic equations, inequalities, systems of equations, logarithms, distance and midpoint formulas, lines and circles | MATH 082, 088, or 090 with C or higher OR placement into MATH 099 OR permission of math instructor |
| Grays Harbor | MATH 098 | Intermediate algebra | This course is intended to prepare students for work in College Level math and math related subjects… Topics include functions and equations containing linear, quadratic, polynomial, rational and radical expressions; inequalities, linear systems, exponentials and logarithms; and applications involving basic science and business mathematical models. | A grade of C- or better in MATH 095 [Elementary algebra] OR appropriate placement test score OR instructor permission |
| Green River | MATH 097 | Intermediate algebra | Study of the definition of a function; graphs and solutions of linear equations and inequalities, graphs and solutions of quadratic, rational, radical and literal equations; complex numbers; radical expressions; variation; and applications. | Either MATH 072 [elementary algebra], 085 [technical mathematics I], or 116T [technical mathematics 2] with a grade of 2.5 or higher; OR appropriate placement test score; OR high school transcript evaluation. |
| Green River | MATH 097R | Intermediate algebra—Resource module | Self-paced, individual resource modules that supplement concepts learned in MATH 097. Recommended for students who want extra help in MATH 097 and for those who need to work on specific skills to prepare for MATH 097. Students use the Math Learning Center resources…to work on concepts learned in MATH 097. Students must complete a minimum of 22 hours of work to receive 1 credit, 44 hours for 2 credits. *This is a pass/no credit course.* | NA |
| Highline | MATH 095 | Fundamentals of intermediate algebra | Intermediate algebra taught in context, using Excel to enhance understanding of algebraic concepts. Topics include numeracy (ratio, proportion, unit analysis, scientific notation, large and small numbers, interpreting data); applications of the rectangular coordinate system such as linear, quadratic or exponential growth; formula use involving rational and radical expressions; laws of exponents; and systems of equations | MATH 081, 085, or 091 with 1.7 minimum; this course is only for students planning to take MATH& 107 or PHIL& 106—see a full-time math instructor before registering |
| Highline | MATH 097 | Intermediate algebra | Coordinate plane, functions, equations, inequalities, properties of lines, radical expressions and quadratic equations. | COMPASS algebra 47 or MATH 091 with 1.7 minimum |
| Lake WA | MATH 099 | Intermediate algebra | A one-quarter course in intermediate algebra concepts and operations. The course includes solution of equations of second and higher degree, factoring, rational expressions, roots and exponents, complex numbers, functions, and graphing. Rigorously paced, requiring a considerable time commitment, it is equivalent to second year high school algebra. | MATH 090 [Introduction to Algebra] or equivalent placement test score. |
| Lake WA | MATH 099A | IA Part 1 | Intermediate algebra covers rational expressions, roots and exponents, complex numbers, functions, graphing, and the solution of quadratic equations. 099A covers Part 1 of MATH 99. (2 credits) | MATH 090 [Introduction to Algebra] or equivalent placement test score and instructor permission. |
| Lake WA | MATH 099B | IA Part 2 | Intermediate algebra covers rational expressions, roots and exponents, complex numbers, functions, graphing, and the solution of quadratic equations. 099B covers Part 2 of MATH 99. (3 credits) | MATH 099A and instructor permission. |
| Lower Columbia | MATH 099 | Intermediate algebra | This course reviews concepts covered in Elementary Algebra (092) in greater depth, including algebraic operations, equations and inequalities, graphs of polynomials, exponents, roots and radicals, functions, and introduction to complex numbers and logarithms *(Note: MATH 099 not accepted by all baccalaureate institutions; check with your advisor…)* | MATH 092 with a grade of C or better |
| North Seattle | MATH 098 | Intermediate algebra | Sets and the real number system, linear, polynomial, rational, radical, exponential and logarithmic expressions and equations, linear systems of equations, graphs and applications. | Placement exam, or MATH 085 or MATH 097 with a 2.0 or better. |
| Olympic | MATH 099 | Intermediate algebra | Second course in the sequence of elementary and intermediate algebra. Graphing linear and quadratic functions and conic sections; systems of equations; rational expressions; radical expressions and rational exponents; logarithmic and exponential equations. | MATH 094 [elementary algebra] or MATH 097 [?not in catalog] with a 2.o or above OR satisfactory placement test score |
| Peninsula | MATH 099 | Intermediate algebra | Elementary algebra review, first- and second-degree equations, applications, polynomials, factoring, radicals and exponents, logarithms, graphs, complex numbers, and linear systems. | 2.0 or higher in MATH 072 [elementary algebra] or equivalent. |
| Pierce | MATH 095 | Intermediate algebra with modeling | Intermediate algebra taught in context, focusing on the use of linear, quadratic power, and exponential functions to model and help solve problems encountered in the real world…This course serves as an alternative to MATH 098 for students who need only Statistics, Math in Society, or selected other quantitative skills courses. | Satisfactory placement test score OR MATH 059 or MATH 060 [variations on Introduction to Algebra] with a grade of at least 2.0 OR instructor permission |
| Pierce | MATH 098 | Intermediate algebra | Function concepts and graphs; rational and radical expressions; solving quadratic, rational, radical, absolute value and exponential equations; applications. | Satisfactory placement test score OR MATH 059 or MATH 060 [variations on Introduction to Algebra] with a grade of at least 2.0 OR instructor permission |
| Renton | MATH 095 | Intermediate algebra | This course covers the following topics in algebra: review of selected elementary algebra topics; factoring polynomials; rational expressions; rational exponents and radicals; quadratic equations and complex numbers; functions and their graphs, and various non-linear equations. This class is taught either in traditional lecture mode or through individually tailored, interactive computer instruction… | Completion of MATH 085 [Beginning algebra] with a 2.0 or higher  or placement by COMPASS or Math Placement Test. |
| Seattle Central | MATH 098 | Intermediate algebra | Linear, quadratic, exponential and logarithmic models, and other intermediate algebra skills (some sections may be linked to other courses or require entry code) | MATH 085 with 2.2 or better or a year of high school algebra and placement exam |
| Shoreline | MATH 097 | Fundamentals of Intermediate algebra I | Simplifying & evaluating linear & rational expressions. Solving these types of equations. Introduction to functions. Systems of linear equations. Solving linear & absolute value inequalities. Applications. Together, MATH 097 and 098 serve as prerequisite for college-level quantitative reasoning courses. | MATH 80 (2.0 or better) or a score of 60 or higher on the Algebra COMPASS test (or equivalent score on SAT, ACT, or ASSET.) |
| Shoreline | MATH 098 | Fundamentals of Intermediate algebra II | Simplifying and evaluating radical, quadratic, exponential and logarithmic expressions. Solving these same type of equations with applications to real world modeling. Graphing quadratic functions. Together, MATH 097 and 098 serve as prerequisite for college-level quantitative reasoning courses. | MATH 097 (2.0 or better. |
| Shoreline | MATH 099 | Intensive Intermediate algebra | Simplifying and evaluating linear, quadratic, radical, and rational expressions. Solving these same types of equations with graphs and applications to real world modeling. Introduction to functions, exponential functions, and logarithms. | MATH 080 (2.0 or better) or a score of 60 or higher on the Algebra COMPASS test. |
| Skagit Valley | MATH 099 | Intermediate algebra | A course designed to prepare students for entry into college-level mathematics courses. Topics include: systems of equations, linear and absolute value inequalities, rational exponents and radicals, complex numbers, solving and graphing quadratic equations, composite and inverse functions, logarithmic and exponential functions. [See below for learning outcomes.] | MATH 098 [Beginning algebra II] with a grade of C or higher OR appropriate math placement score |
| South Puget Sound | MATH 099 | Intermediate algebra | Full treatment of rational, radical, and quadratic expressions and equations. Linear, quadratic, exponential, and logarithmic relations with their graphs and applications. | MATH 096 or MATH 098 with a grade of C or better OR appropriate placement test score required. B- or better in MATH 096 or 098 recommended. |
| South Seattle | MATH 098 | Intermediate algebra | A comprehensive course covering linear, quadratic, exponential, logarithmic equations with applications, and other high level algebra skills. | Math 085[Algebra II]/Math 097 [Elementary Algebra] with a 2.0 or better or appropriate placement score. |
| Spokane CC | MATH 097 | Intermediate algebra: a modeling approach | This course covers intermediate algebra skills through a modeling approach. Topics include linear, quadratic and exponential functions, and introductions to geometry, probability, sequences and statistics. | MATH 091 and 092 [elementary algebra sequence] or MATH 096 [Introductory algebra] with a 2.0 or better within the last 3 years OR an appropriate placement score |
| Spokane CC | MATH 098 | Algebra III | This course is a continuation of MATH 094 [Algebra II] and covers intermediate algebra skills. Topics include sequences, rational expressions and equations, basic functions that include but are not limited to absolute value, exponential and logarithmic. | MATH 094 with a 2.0 or better OR an appropriate placement score |
| Spokane CC | MATH 099 | Intermediate algebra | This course covers intermediate algebra skills. Topics include a review of beginning algebra concepts, radicals, inequalities, functions and quadratic functions. Other topics may include exponential and logarithmic functions. | MATH 091 and 092 [elementary algebra sequence] or MATH 096 [Introductory algebra] with a 2.0 or better within the last 3 years OR an appropriate placement score |
| Spokane Falls | MATH 098 | Algebra III | This course is a continuation of MATH 094 and covers intermediate algebra skills. Topics include sequences, rational expressions and equations, basic functions that include bit are not limited to absolute value, exponential and logarithmic | MATH 094 with a 2.0 or better OR an appropriate placement score |
| Spokane Falls | MATH 099 | Intermediate algebra | Topics include a review of beginning algebra concepts, radicals, inequalities, functions and quadratic functions. Other topics may include exponential and logarithmic functions. | MATH 091 & 092 or 096 with a 2.0 or better within the last 3 years; or an appropriate placement score |
| Tacoma | Math 095 | Intermediate algebra | Topics include introduction to functions; linear, quadratic, exponential and logarithmic functions and their applications; systems of linear equations and inequalities and their applications; rational exponents and radicals. | MATH 090 with a C or higher or assessment above MATH 90; READ 085 with a C or higher or assessment above READ 085 |
| Tacoma | Math 096 | Accelerated algebra | A survey of algebraic concepts intended for students majoring in math, science or engineering. Topics include linear, quadratic, and radical functions, simplifying expressions, and solving equations. The course integrates the necessary algebraic skills and concepts into MATH 140 (Intro to Precalculus) | MATH 090 with a B or higher or MATH 095 with C or higher, or appropriate placement; READ 095 with a C or higher or assessment above READ 085 (MATH 140 must be taken concurrently) |
| Tacoma | MATH 097 | Intermediate algebra for the liberal arts | An alternative to MATH 099 (now 095) for students going on to MATH& 107, MATH& 146, or MATH 170. Topics include linear, quadratic, exponential and logarithmic functions; equations and their applications; systems of linear equations; radical expressions; and scientific notation. | READ 085 and MATH 090 or assessment above MATH 090 |
| Walla Walla | MATH 095 | Intermediate algebra | The second of a two-course series covering the basics of algebra (MATH 065/095). Topics include working with algebraic expressions(polynomials, algebraic fractions, radicals, exponential, logarithmic), solving equations and inequalities (polynomial, rational, radical, exponential, logarithmic), solving systems of linear equations, an introduction to functions, and graphing functions/relations (linear, quadratic, simple conics, exponential, logarithmic). *[See Master Course Outline below.]* | Appropriate placement score OR grade of C- or higher in MATH 065 OR permission of the Mathematics Department |
| Wenatchee Valley | MATH 097 | Intermediate algebra | Topics include simplifying, solving and intermediate modeling with rational expressions, absolute value expressions, linear inequalities, radical expressions, and quadratics. | A “C” or better in MATH 096 or MATH 096B or appropriate placement recommendation |
| Whatcom | MATH 099 | Intermediate algebra | Study of graphs, functions, inequalities, radicals and complex numbers. Introduction to exponential and logarithmic functions. Also a brief introduction to right triangle trigonometry and its applications. | MATH 098 [elementary algebra II] with a C or better |
| Yakima Valley | MATH 094 | Algebra III: Intermediate algebra | This course is a continuation of MATH 091 (Algebra II: Elementary algebra). Topics include graphing, radicals, quadratic functions, exponential functions, and logarithmic functions. | MATH 091 with a grade of C or better |
| Yakima Valley | MATH 095 | Intermediate algebra | A course in algebraic methods, including polynomials, exponents, and radicals; solving first- and second-degree equations; solving linear inequalities; and graphing and finding equations of functions. | MATH 085 [Beginning Algebra] with a grade of C or better OR YVCC placement into MATH 095 |

**EXAMPLES OF DETAILED COURSE OUTCOME DESCRIPTIONS**

[South Seattle Intermediate Algebra Master Course Outline](http://www.southseattle.edu/programs/academ/officialcourseoutlines/math/math098.pdf)

GENERAL COURSE OBJECTIVES:

1. Demonstrate success on evaluations over the topics studied.

2. Work to build a foundation of algebra skills for subsequent mathematical classes.

3. Improve skills in algebra through symbolic manipulation and applications

4. Develop skills in critical thinking and problem solving

5. Develop regular attendance and time management/organization skills.

TOPICAL OUTLINE:

I. Solving linear equations and inequalities

II. Introduction to functions

III. Equations and inequalities in two variables

IV. Systems of linear equations

V. Rational expressions and functions

VI. Rational exponents and roots

VII. Quadratic equations

VIII. Exponents and polynomials

IX. Logarithms and applications

[Walla Walla CC Intermediate Algebra Master Course Outline](http://www.wwcc.edu/cat/course_details.cfm?dc=MATH&cc=200&cl=095)

**Intended Learning Outcomes**

* Add, subtract, multiply, factor and divide polynomial expressions.
* Solve linear equations and inequalities in one variable.
* Translate word problems into an algebraic sentence and solve.
* Solve absolute value equations and inequalities.
* Add, subtract, multiply, and divide rational expressions.
* Solve equations and inequalities, including word problems, involving rational expressions.
* Simplify complex fractions.
* Simplify, add, subtract, multiply, and divide radical expressions.
* Solve equations containing radicals.
* Use properties of exponents with radical exponents.
* Simplify, add, subtract, multiply, and divide complex numbers.
* Solve quadratic equations by factoring, square root property, completing the square, and quadratic formula.
* Solve quadratic inequalities.
* Know and be able to use the midpoint and distance formulas as they relate to the Cartesian coordinate system.
* Find the equation of a line given sufficient information.
* Recognize when a relation is a function and use function notation.
* Define the domain and range of given functions.
* Be able to recognize and graph linear, quadratic, exponential, and logarithmic functions.
* Solve word problems involving direct, inverse, and joint variation.
* Solve systems of two linear equations in two variables using the substitution and the elimination (addition) methods.
* Use systems of linear equations to solve word problems.
* Solve systems of three linear equations in three variables.
* Solve systems of linear inequalities in two variables.
* Add, subtract, multiply, divide, and find the composition of functions.
* Find and use inverse functions at an introductory level.
* Solve exponential and logarithmic equations at an introductory level.
* Be able to use the properties of logarithms at an introductory level.

[Skagit Valley Intermediate Algebra Learning Outcomes](http://www.skagit.edu/cat_search3.asp?crs=571&cat=2010&highlight=)

**After completing this course, the student will be able to:**

1. Solve quadratic equations and inequalities.
2. Solve linear, compound, absolute-value and quadratic inequalities
3. State solutions to linear, compound, absolute-value and quadratic inequalities using set-builder and interval notations.
4. Graph solutions to linear, compound, absolute-value and quadratic inequalities.
5. Solve quadratic equations using factoring, completing the square, and the quadratic formula.
6. Identify components of rational exponents.
7. Convert between rational exponent and radical notations.
8. Solve equations utilizing rational exponents.
9. Solve equations with radical notation.
10. Graph quadratic functions.
11. Perform computations with complex numbers.
12. Determine composite functions.
13. Determine inverse functions.
14. Graph exponential and logarithmic functions.
15. Apply properties of logarithms.
16. Solve exponential and logarithmic equations.
17. Solve applications related to exponential and logarithmic functions.
18. Solve applications relevant to course content.
19. Have a broader understanding of the history of mathematics and its contributors.
20. Apply alternative mathematical techniques, from a historical perspective, where appropriate.
21. Understand how mathematics is used in other fields and occupations.

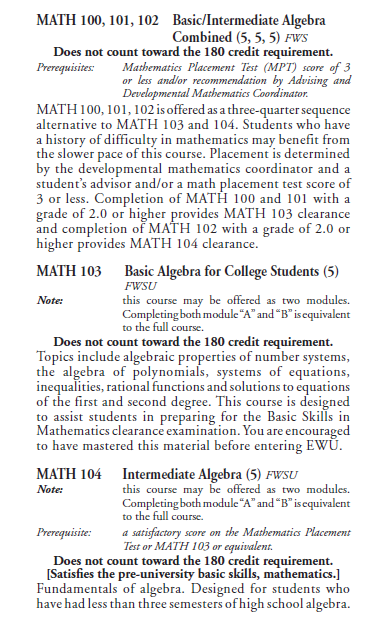
[Bellevue College Intermediate Algebra Learning Outcomes](http://bellevuecollege.edu/classes/math/)

After completing this course, students should be able to:

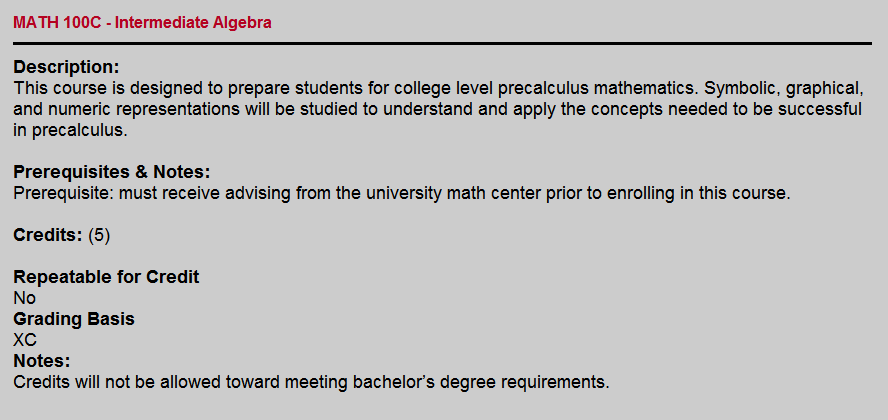
* Evaluate expressions using function notation
* Represent functions using formulas, tables and graphs
* Write the equation of a line from data
* Identify parallel and perpendicular lines
* Solve linear systems in two variables using graphing and algebraic methods
* Set up and solve application problems using linear systems
* Solve quadratic equations by factoring, completing the square and the quadratic formula
* Determine the number of solutions to a quadratic equation using the discriminant
* Graph a quadratic function and determine it’s vertex and intercepts
* Set up and solve quadratic application problems
* Add, subtract, multiply, divide and factor polynomials
* Add, subtract, multiply and divide rational expressions (algebraic fractions)
* Solve rational equations
* Set up and solve application problems using inverse variation, direct variation and proportions
* Simplify radical expressions
* Solve radical equations
* Convert from radical notation to rational exponent notation and from exponent notation to radical notation
* Convert from logarithmic form to exponential form; and from exponential form to logarithmic form
* Solve exponential and logarithmic equations
* Graph exponential and logarithmic functions
* Solve exponential and logarithmic application problems

**RELEVANT CATALOG DESCRIPTIONS FROM WASHINGTON BACCALAUREATE INSTITUTIONS**

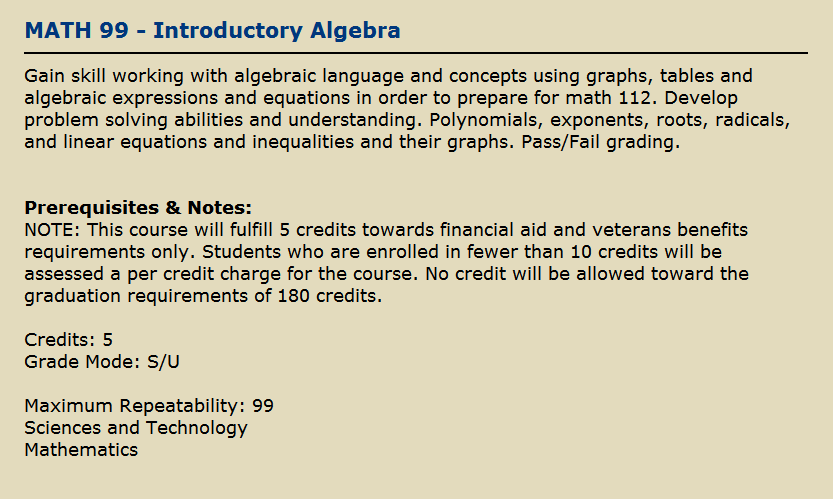
Eastern Washington University



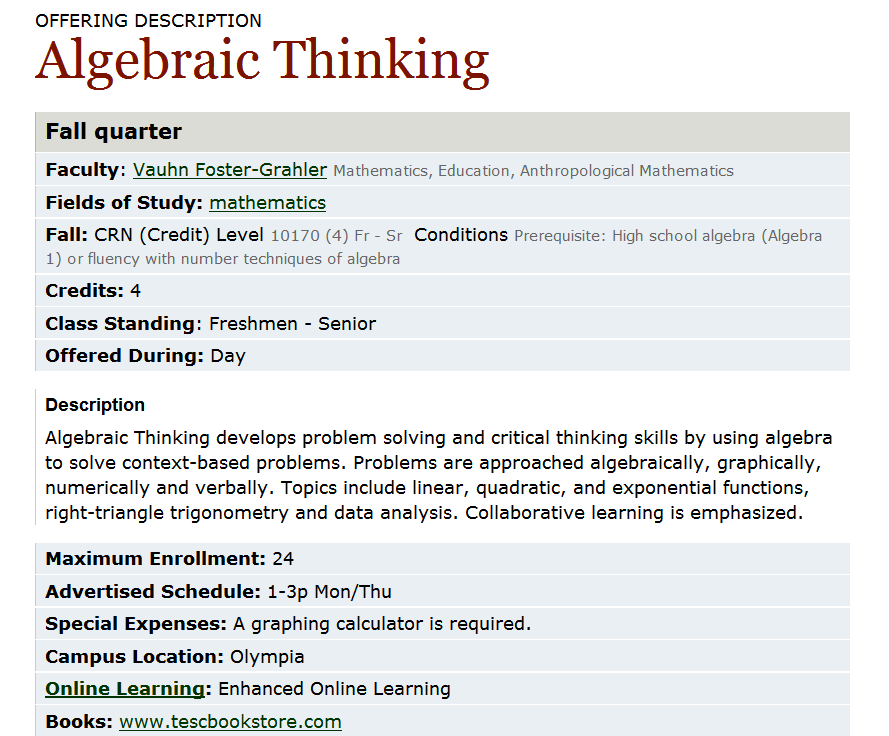
Central Washington University



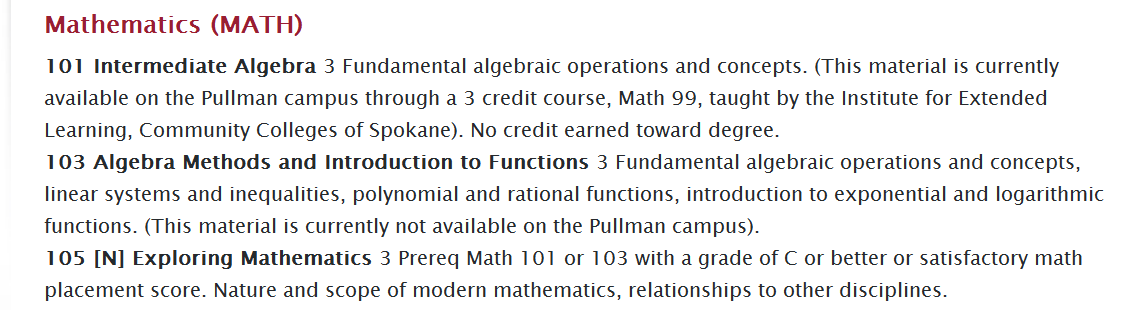
Western Washington University



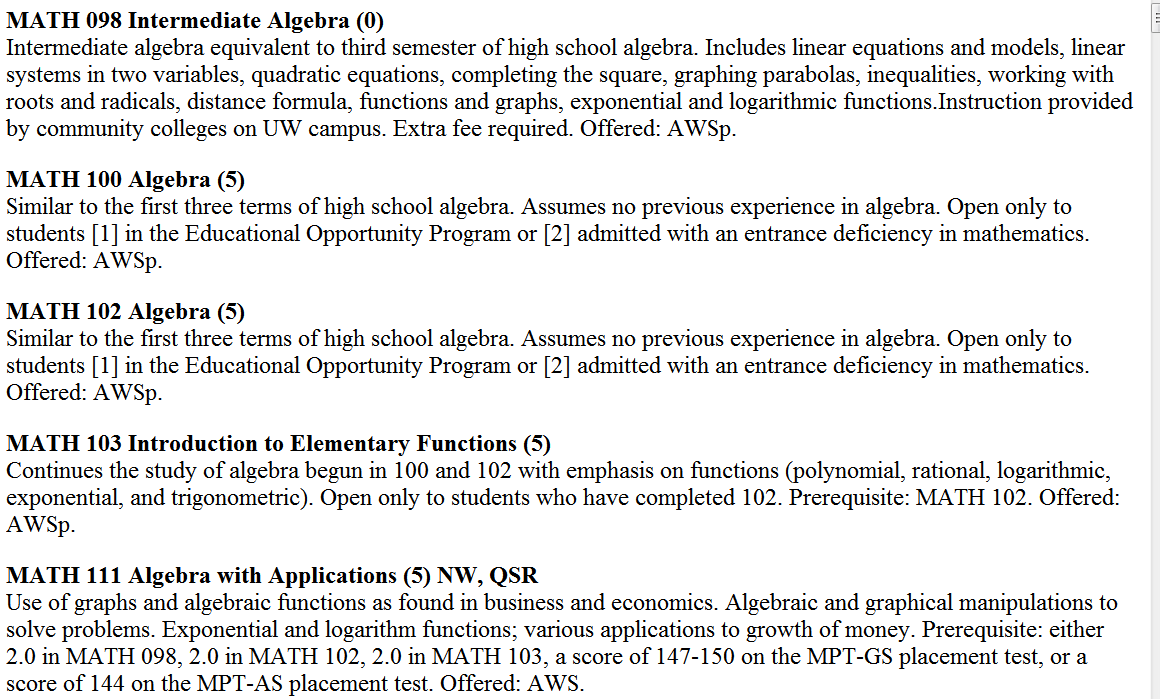
The Evergreen State College



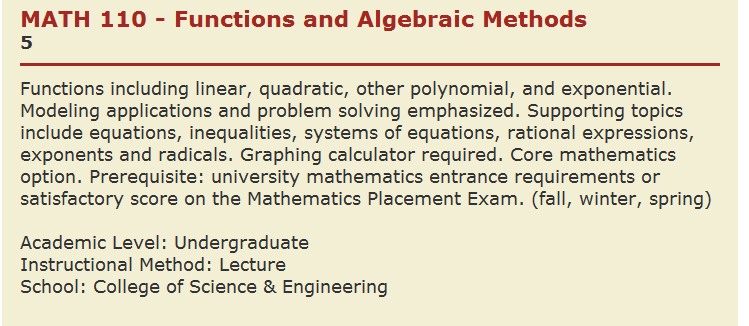
Washington State University



University of Washington



Seattle University



Gonzaga University

